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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/526,244

09/19/2005

Sven Mattisson

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07/27/2007

ERICSSON INC.
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EXAMINER

CHANG, JOSEPH

ART UNIT

PAPER NUMBER

2817

MAIL DATE

DELIVERY MODE

07/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/526,244

Applicant(s)

MATTISSON, SVEN

Examiner

Joseph Chang

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 19-38 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- ☐ Notice of Informal Patent Application
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 19-21,24,25 and 35-38 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Midtgaard.

Regarding claims 19-21 and 24-25, Midtgaard discloses in Fig 1 a balanced crystal oscillator circuit having a piezoelectric element (7), a first oscillator sub-circuit (left half) incorporating a first transistor (10) and a second oscillator sub-circuit (right half) incorporating a second transistor (11), wherein the transistors each have different types of transistor terminals (base, collector, emitter) and wherein the oscillator sub-circuits are configured with a first, second and third interconnection (base, collector, emitter), the circuit further comprising: each interconnection being made at a pair of like type of transistor terminals of the first and second transistors (10, 11); the first interconnection being between a pair of like type of transistor terminals and a connection to a ground reference (base terminals); the second interconnection being between a pair of like type of transistor terminals with a first resonator element (7) therein-between (collector terminals); and the third interconnection being between a pair of like type of transistor terminals with a second resonator element (capacitor) therein-between (emitter terminals), wherein at least one the transistors is provided with bias

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current (3,4,21,22) and said first and second oscillator circuits being arranged to interact by means of said first and second resonator elements to form a balanced oscillator signal. (See Figure 1 of Midtgaard and Fig 2b of this application, they are identical).

Regarding claim 35, Fig 3 shows RC-circuit (48, 16, 49, 17 paragraph [0064]).

Regarding claims 36-37, Figure 3 shows non-resonator elements (48 and 49).

Regarding claim 38, the circuit implemented in a mobile telephone is an intended use.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 22, 23, 26-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Midtgaard.

Regarding claims 22, 23 and 26, as noted above, Midtgaard discloses a balanced crystal oscillator circuit with a dual common-base transistor coupling. However, Midtgaard does not disclose the circuit with a dual common-collector or common-emitter transistor coupling. As would have been well known in the art, common-collector or common-emitter transistor coupling is well recognized for amplifier configuration based on a desired input and output impedance consideration. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention

to modify the circuit to common-collector or common-emitter transistor coupling because such modifications would have provided the benefit of coupling characteristic.

Regarding claims 27-29, such bias current (resistor, active current source or transistor operated in class C) would have been obvious based on well-known bias current means.

Regarding claims 30-34, modification to a MOSFET would have been obvious to one of ordinary skill in the art based on a mere substitution of art recognized equivalent transistor.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Chang whose telephone number is 571 272-1759. The examiner can normally be reached on Mon-Fri 0700-1730.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


JOSEPH CHANG
PRIMARY EXAMINER